

# DEPARTMENT OF WATER RESOURCES

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# STRATEGIC BUSINESS PLAN



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## DIRECTOR'S MESSAGE



Nowhere in the United States is management of water resources more sophisticated than California. Despite having the most variable climate in the nation, we manage to support the biggest population of any state, the most robust farm economy, and natural landscapes that attract visitors from across the globe. By necessity, the California Department of Water Resources must be a large, complex, adroit, and capable organization. Achieving our mission requires first that we articulate and share the same goals.

That's the purpose of this report, the DWR Strategic Business Plan. In this first update since 2005, we describe the primary goals of a department created 60 years ago with a singular mission - to build the State Water Project - and now shoulders the broader job of ensuring that we and all those responsible for managing water resources in the state do so in a sustainable way. In this context, we define sustainability as achieving a resilient balance in these primary societal values: reasonable public health and safety, stable economy, vital ecosystems, and opportunities for enriching experiences (e.g., recreation, cultural value of water). This plan describes the underlying principles we share at DWR and our goals and strategies for the coming years. It gives us a common focus. We need this more than ever, as our department implements the historic Sustainable Groundwater Management Act, adapts to climate change, and carries out the multi-faceted California Water Action Plan of the Brown Administration.

Management of water resources in California is largely a local enterprise, but the state's role is vital. DWR is statutorily mandated to conduct strategic long range planning on behalf of the state through the California Water Plan. We provide planning and financial incentives to guide smart investments by local water managers and encourage cooperation to manage the use and flow of water effectively, while protecting watershed health. We are helping local agencies with the formidable task of forming groundwater sustainability agencies that must bring hard-working aquifers into balance, so that future generations do not suffer the worst effects of overdraft. We operate the State Plan of Flood Control which protects about 1.3 million residents and \$80 billion in assets in the Central Valley, and we assist other flood management agencies with statewide risk assessment and planning. Our State Water Project continues to supply two of every three Californians with drinking water, but like our flood system, it is aging and vulnerable.

Strategic planning is an ongoing, evolutionary process, and I'm confident that as California's primary water planning entity, DWR will provide the leadership we need to sustain our state's vibrant economy and environment.

## VISION AND MISSION

### Vision

*"A Department of Water Resources respected for its competence, dedicated to its mission, and composed of expert, well-trained, loyal employees."*

### Mission

*"To sustainably manage the water resources of California, in cooperation with other agencies, to benefit the state's people and protect, restore, and enhance the natural and human environments."*

## PURPOSE OF THE STRATEGIC BUSINESS PLAN



This Plan lays out the strategic roadmap for organizing and implementing the Department of Water Resources' (DWR's) work to achieve our vision and accomplish our mission. It identifies the goals, objectives, and key strategies essential for DWR's success in sustainably managing the water resources of California.

In the midst of an ever-changing arena of water resources management in California, DWR recognizes the value of having a clear strategy in place. This Plan is a strategy-level document that conveys to our employees, other governmental agencies (at the state, federal and local levels), and all people of California, the framework and high-level goals, objectives and strategies that guide delivery of DWR's services. DWR is committed to managing the state's water resources in the most effective and sustainable manner possible while meeting our legal and policy obligations.

Because this is a strategic plan, it does not describe all DWR services and activities. DWR managers are expected to prepare program-level plans to align implementation of myriad programs with this Department Strategic Business Plan.



# MANAGING CALIFORNIA'S WATER RESOURCES SUSTAINABLY

## reliability



Water has shaped California's past and will help shape its future. Managing water and its associated resources today and for future generations requires a strategic, integrated approach and cooperation across all levels of government. Today, California's water system supplies water to more than 38 million people and 10 million acres of irrigated agricultural lands. It delivers high-quality water to major industrial facilities that fuel the largest economy in the nation and the sixth largest in the world. A large portion of this water supply system relies on the Sacramento-San Joaquin River Delta for water conveyance. Many challenges face our water management system, including maintaining water reliability and sustainability.

## restoration



The water challenges facing our communities, watersheds, and economies compelled the State of California to adopt a comprehensive and practical approach to water resources management, outlined in the Governor's California Water Action Plan (Action Plan). The Action Plan states, "There is a broad agreement that the State's water management system is currently unable to satisfactorily meet both ecological and human needs and is too exposed to wet and dry climate cycles and natural disasters. Solutions are complex and expensive and they require the cooperation and sustained commitment of all Californians working together." The Action Plan was developed to meet three broad objectives: more reliable water supplies, the restoration of important species and habitat, and a more resilient, sustainably managed water resources system (water supply, water quality, flood protection, and environment) that can better withstand inevitable and unforeseen pressures in the coming decades. The Action Plan outlines ten priority actions to improve water and flood management in the State while enhancing our ecosystem. It encourages implementation of multi-benefit integrated programs through cooperation among federal, State, and local governments, regional agencies, and public and private sectors.

## resiliency



In addition to the Action Plan, steps have been taken by the Administration and Legislature in the last decade to move us toward more sustainable management of the State's water resources. The most significant action was the State's passage of the Sustainable Groundwater Management Act in 2014. For the first time in history, the State must manage groundwater use in a sustainable manner. The landmark law requires water and land use agencies to come together in governance and develop plans to manage groundwater—in the context of an overall regional water balance—sustainably. The State will provide financial incentives, technical tools and assistance, and enforcement to ensure implementation of the legislation at the regional level. The key to success, however, lies with the regional agencies' effective governance and their ability to balance regional supply and demand in a more sustainable

fashion. DWR is the lead state agency responsible for implementing the Act, with the State Water Board providing intervention when regions are unable to achieve sustainability.

Over the last decade, California voters have approved several general obligation bonds to provide financial incentives to manage water resources in a more integrated, sustainable manner. The most recent voter-passed bond was Proposition 1 – the Water Quality, Supply, and Infrastructure Improvement Act of 2014 – which authorized the issuance of more than \$7 billion in bonds to finance a water quality and infrastructure improvement program. This bond law provides badly needed financial resources to initiate programs that would contribute to sustainable water management in the State, including \$2.7 billion for a storage program that would enhance water supply and Delta water quality and ecosystems, and contribute to flood management and recreation. While the infusion of bond funds has provided a good foundation, the state and its regions require a stable, reliable source of funding for the future.

Given the adoption of the California Water Action Plan, and the passage of the Sustainable Groundwater Management Act and Proposition 1, sound planning is required to successfully achieve the goals of these initiatives. This Strategic Business Plan has been prepared as a road map to effectively implement these initiatives and to enhance water supply reliability and regional water management sustainability throughout the State while protecting valuable ecosystems. DWR managers will prepare strategic and implementation plans to ensure that programs align with the Department Strategic Business Plan.





# IMPORTANT FACTORS AFFECTING WATER MANAGEMENT



The following important factors must be considered when managing water resources in a sustainable manner:

- **Sustainability Outcomes** – It is important to clearly define and agree on the intended sustainability outcomes; it is impossible to align our programs for sustainability without shared intent.
- **Governance** – Our existing governance structures for managing water resources in the State were established during a different era of water management, and in many cases they are fragmented and at cross purposes. To manage our resources for sustainability, we need to work with local agencies in formation of strong and capable regional governance.
- **Funding** – Managing our water resources for sustainability and at river basin scale is a paradigm shift and will require resources at all levels throughout the State. This shift will be expensive, and historic patterns of funding have consistently neglected significant areas within the water management system, such as ecosystem sustainability, water quality management, and flood management.
- **Regulations and Permitting** – The current regulatory and permitting environment is the source of much conflict within the water management system. The approach to regulations and permitting must be revisited to design a more effective project permitting process that would result in managing toward sustainability.

## IMPLEMENTATION PRINCIPLES

DWR has identified the following principles to help guide and focus implementation of our programs and activities.

**Commitment to Workplace Safety Practices** — DWR is committed to providing and maintaining a safe environment for both the public and our employees. We have implemented a department-wide safety program with robust training and safe workplace practices to ensure the safety of employees, contractors, and those who visit our facilities throughout the State.



**Commitment to Equal Employment Opportunity** — DWR is committed to providing equal employment opportunities to our employees and promoting a diverse workforce reflective of the population we serve.

**Working for the People of California** — We honor our commitments and responsibilities based on the law and sound public policies to ensure we are providing the best public service to the people of California.

**Operating in a Transparent Manner** — DWR is committed to conducting its business and implementing its programs in a transparent manner with open processes. DWR will promote transparency internally and externally by engaging our partner agencies and the public.

**Promoting Environmental Stewardship** — DWR is committed to balancing the health of natural systems and water-related human activity. Managing the systems of water supply and flood management are more successful when ecosystem functions are accommodated and sustained. The Department strives to sustain vital ecosystems in California while undertaking our water management actions.

**Practicing Integrated Water Management** — DWR is committed to planning and implementing integrated water management decisions, which emphasize multi-benefit resource outcomes. This approach benefits both people and the environment, and fosters a reliable water supply, public safety, environmental stewardship, and a stable economy for the State.

**Working Toward Sustainable Water Management** — Managing our water resources for sustainability is a shift in paradigm that requires us to reassess our programs, priorities, and objectives. This shift is needed to ensure long-term water system reliability and resiliency, and to achieve our goal of enhancing and maintaining robust public safety, environmental stewardship, and economic stability in the State. We are committed to assisting regional agencies implement regional programs that achieve regional sustainability, as required by the Sustainable Groundwater Management Act.

**Commitment to Public Safety** — We demonstrate our commitment to public safety through DWR flood and drought emergency management and dam safety inspections. Our efforts protect lives and infrastructure.

**Working with Our Partners** — We understand that water resources management in California is a shared responsibility among local, State and federal agencies, as well as private entities. We value our partnerships. We will work with other agencies and interested parties to build partnerships based on trust and mutual respect in order to improve water resources management and achieve regional and statewide sustainability.

# GOALS, OBJECTIVES, AND STRATEGIES

The DWR Strategic Business Plan is organized under six goals that collectively represent the Department's mission and its business:

1. Provide Strategic Leadership for the Planning and Management of California's Water Resources
2. Ensure a Reliable Water Supply for California through Safe and Efficient Operation, Maintenance, and Management of the State Water Project
3. Utilize Leadership, Collaboration, and Strategic Partnerships to Build Capacity for Regional Water Sustainability through Local Technical and Financial Assistance
4. Protect Lives, Infrastructure, and the Environment through Management of Dams, Floods, and Protecting Vital Ecosystems
5. Increase Resiliency to Reduce Residual Risks Resulting from Floods, Drought, and Climate Change
6. Ensure Business Efficiency and Accountability: Provide Professional, Cost-Effective, and Timely Services in Support of DWR's Programs, Consistent with Governmental Regulatory and Policy Requirements.

Each of the above goals has specific objectives and strategies for successful implementation of the overall Strategic Business Plan, as described in the following sections.

## Goal 1 | Provide Strategic Leadership for the Planning and Management of California's Water Resources

Objective 1.1: Conduct Strategic Water Management Planning Through Development and Updating of the California Water Plan

Strategies to achieve this objective include:

**1.1.1: Prepare the California Water Plan Update Every Five Years:** The statutorily-required California Water Plan Update presents a comprehensive investment portfolio supported by a sound and implementable financing plan.

**1.1.2: Develop and Conduct Water Management Effectiveness Assessments:**

Every Water Plan Update will assess the effectiveness of its past investments and take actions to ensure that planned investments achieve the intended outcome.

**1.1.3: Develop, Evaluate, and Update Water Portfolio Investments:** Each Water Plan Update will formulate a sound and implementable water investment portfolio.

**1.1.4: Formulate a Strategy for Statewide Water Management Financing:** Each Water Plan Update will present a financial plan in support of its investment portfolio.

**Objective 1.2: Develop Integrated Water Management Evaluation Systems**

Strategies to achieve this objective include:

**1.2.1: Maintain and Improve a Real-time Cooperative Data Collection System:**

To assess and evaluate the performance of the State water management system, a real-time data collection system is needed. Because so many agencies are engaged in the California water management system, the real-time data collection system must be a cooperative effort among State, federal, and local agencies.

**1.2.2: Facilitate Data Exchange and Management:** The information and data collected through the cooperative program must be shared and exchanged among all agencies by establishing an information management and exchange system.

**1.2.3: Assess System Performance:** DWR collects and exchanges water information with federal and local agencies to conduct an integrated assessment of the flood and water management system and its performance and reliability, including efficient and consistent evaluation of climate change impacts to DWR's projects and activities. DWR is committed to enhancing its water system evaluation and incorporating its information in California Water Plan Updates.

**1.2.4: Disseminate Information to the Public:** DWR will share and disseminate its products and information to the public as a part of its commitment to transparency.

## Goal 2

### Ensure a Reliable Water Supply for California through Safe and Efficient Operation, Maintenance, and Management of the State Water Project

#### Objective 2.1: Operate and Maintain the State Water Project

Strategies to achieve this objective include:

**2.1.1: Maintain Maximum Operational Flexibility and Reliability:** As the SWP ages, and as new technologies become available, investments in new and upgraded facilities will ensure the maximum amount of water can be stored, efficiently conveyed, and delivered under a broad and complex range of regulatory and operational requirements.

**2.1.2: Maintain a Well-Trained and Educated Workforce:** DWR will continue to administer its industry-leading Apprentice Program to train specialized water and power utility personnel, recruit and develop professional engineers and scientists, and provide ongoing job-required/related educational programs for all employees.

**2.1.3: Utilize Operational Reliability and Readiness Metrics:** DWR uses Operational Availability data and regular detailed condition assessment inspections to ensure pumping and power generation units are available when needed and water storage and conveyance facilities are safe and reliable to operate. Planned outage and replacement schedules of SWP components help ensure operational readiness of SWP facilities when needed.

**2.1.4: Continuously Improve DWR's SWP Code of Safe Work Practices:** Safety is the responsibility of all DWR SWP employees, from apprentices to managers. Empower all employees to notice and stop unsafe work, and always put safety first. A safely operated SWP is a reliable SWP.

**2.1.5: Emergency Preparedness:** Ensure that all SWP facilities have up-to-date emergency action plans and coordination protocols with other State and federal entities as necessary. Regular exercises are carried out to ensure effective response and mitigation measures.

**Objective 2.2: Ensure State Water Project Compliance  
and Resources Stewardship**

Strategies to achieve this objective include:

**2.2.1: Continue to Foster and Enhance a Culture of Compliance:** Continue to foster and enhance a culture of SWP regulatory compliance by educating and training staff and providing resources to successfully complete regulatory compliance requirements, obtain timely permits for projects, programs, and maintenance activities, and enhance expertise within DWR to maintain SWP flexibility.

**2.2.2: Successfully Implement Reasonable and Prudent Actions to Protect Threatened and Endangered Species:** Work cooperatively with regulatory agencies to develop interim and long-term operations solutions that are responsive to federal and State endangered species acts. This focus is particularly important in the Sacramento-San Joaquin Delta to provide reliable and sustainable water deliveries while balancing all resources.

**2.2.3: Support and Participate in Habitat Restoration Projects that Preserve and Protect Special Status Species Impacted by SWP Operations:** Continue to work cooperatively with habitat restoration partners and advocates to coordinate habitat restoration activities and leverage efficient use of resources to meet SWP requirements.

**2.2.4: Continue to Incorporate Renewable Energy Resources into the SWP Power Portfolio:** Continue to manage and adaptively develop a SWP Power Portfolio that meets renewable energy requirements and complies with Bulk Electric System requirements and FERC Hydropower License requirements while effectively minimizing SWP power costs.

**Objective 2.3: Enhance the Financial Management  
of the State Water Project**

Strategies to achieve this objective include:

**2.3.1: Plan and Optimize State Water Project Capital Investment Decisions:** Develop an enterprise-wide asset management framework for SWP capital assets that addresses condition assessment, risk factors, and replacement schedules for SWP equipment and facilities over 5-year, 10-year, and longer planning horizons.



**2.3.2: Employ Sound Financial Management Practices in the Planning and Issuance of Water System Revenue Bonds:** Consider cost of capital, portfolio structure, repayment period, contractual and statutory requirements, customer affordability, and other utility-centric considerations while ensuring consistent application of DWR’s capitalization and debt management policies and regulations.

**2.3.3: Streamline and Simplify DWR’s SWP Cost Recovery Processes:** Develop improved project planning and standardized budgeting tools to use seamlessly with DWR’s complex cost recovery requirements specified in its Water Supply Contracts.

**2.3.4: Enhance Financial Reporting and Transparency for Effective Decision Making:** Develop cross-functional relationships and reporting tools that enhance the financial management of SWP resources and investments and add to effective decision-making for DWR management.

#### Objective 2.4: Conduct Statewide Water Management Assessments

Strategies to achieve this objective include:

**2.4.1: Assess Water Management Performance:** Assess, evaluate, and propose solutions to improve system water management performance through improved operational agreements, economic analyses, and other methods.

**2.4.2: Support Statewide Water Management Projects:** Support the development and implementation of water management projects at a regional and state level that provide public benefits by facilitating sound investments in storage projects, and providing system operational improvements through reoperation analyses.

**2.4.3: Support State Water Project System Management and Projects:** Provide supporting analyses for institutional agreements and coordinated operating agreements to facilitate stable operations of the SWP with other regional and federal water projects. Continue to provide support for Delta operations and system improvements.

#### Objective 2.5: Provide Delta Regional Assistance to Support Water Supply Reliability

**2.5.1: Update Delta Planning:** Prepare a Delta planning strategy once every 10 years to ensure sound State investment and program focus for management of Delta resources.

**2.5.2: Implement Delta Levees and Ecosystem Projects (Delta Levees Special Projects):** DWR will continue investing in flood protection and ecosystem health improvements in the Delta, as funding becomes available, to promote a sustainable Delta and improve water reliability.

## Goal 3

### Utilize Leadership, Collaboration, and Strategic Partnerships to Build Capacity for Regional Water Sustainability through Local Technical and Financial Assistance

#### Objective 3.1: Support Regional Water Management Assessments

Strategies to achieve this objective include:

**3.1.1: Assess Surface and Groundwater Conditions:** Understanding regional water sustainability requires an accurate assessment of surface and groundwater availability at the regional level, including supporting the development of regional water budgets. DWR will enhance its programs to conduct a surface and groundwater assessment update every five years.

**3.1.2: Assess Land and Water Use:** Land and water use information is a primary component of regional water sustainability. DWR will build upon its land and water use data collection and assessment activities.

**3.1.3: Assess Water Quality and Environmental Conditions:** Water quality, environmental water needs, and land and water use analysis will be evaluated on an ongoing basis to support regional and statewide assessments.

#### Objective 3.2: Provide Regional Assistance

Strategies to achieve this objective include:

**3.2.1: Provide Regional Facilitation and Technical Capacity Assistance:** DWR will provide facilitation services to help diverse regional interest groups work together to form groundwater sustainability agencies and develop their regional sustainability plans. DWR will also provide technical assistance, including providing data, tools, models, and templates to prepare regional water budgets and build regional technical capacities.

**3.2.2: Support Regional Management and Planning:** Regional expertise in water management and planning varies throughout the State. DWR will provide regional management and planning assistance to regional planning groups, as needed.

**3.2.3: Support Ecosystem Restoration:** DWR will work with regional entities to assess ecosystem needs and support ecosystem restoration activities.

**3.2.4: Provide Financial Assistance:** DWR will provide financial assistance to regional agencies using available bond funds and other resources. DWR will also coordinate with the California Water Commission to fund regional projects to improve water supply reliability to help achieve regional sustainability.

### Objective 3.3: Evaluate Regional Sustainability

Strategies to achieve this objective include:

**3.3.1: Assess Governance and Management:** DWR will assess the effectiveness of regional governance and management, and provide guidance and assistance to regional agencies to improve their effectiveness, as needed.

**3.3.2: Review Regional Plans:** DWR will evaluate and approve groundwater sustainability plans, and other regional water management plans submitted in accordance with the Sustainable Groundwater Management Act, or other applicable requirements.

**3.3.3: Provide Regulatory Evaluation:** DWR will coordinate with the State Water Resources Control Board to address compliance issues if an entity is not in compliance with the Sustainable Groundwater Management Act, relevant agricultural and urban water management plan requirements, or other requirements.

## Goal 4

### Protect Lives, Infrastructure, and the Environment through Management of Dams, Floods, and Protecting Vital Ecosystems

#### Objective 4.1: Review Design, Construction, and Maintenance of California Dams to Ensure Safe Performance

Strategies to achieve this objective include:

**4.1.1: Conduct Safety Inspections of the Dams:** Work with jurisdictional dam owners throughout the State to conduct safety inspections and direct them in necessary modifications and repairs to ensure safety of the dams.

**4.1.2: Review and Approve Design, Construction, and Modifications of the Dams in the State:** Conduct engineering reviews and approvals for design of the jurisdictional dams to ensure the dams are constructed, repaired, or modified in a safe fashion.

**4.1.3: Seismic Geology:** Advance the science of seismic geology as it applies to dams' stability to ensure our dams are safe during seismic events.

#### Objective 4.2: Plan and Prepare for Floods to Prevent Loss of Human Life and Reduce Property Damage, and Protect Vital Ecosystems

Strategies to achieve this objective include:

**4.2.1: Conduct Central Valley Flood and Conservation Management Planning:** In collaboration with the Central Valley Flood Protection Board and coordination with federal and local agencies, update the Central Valley Flood Protection Plan every five years as required by the Central Valley Flood Protection Act of 2008, as a strategic flood management plan for the Central Valley.

**4.2.2: Conduct Statewide Integrated Flood Management Planning:** In coordination with the United States Army Corps of Engineers (USACE) and local agencies, conduct flood management planning throughout the State, and periodically update the Flood Future Report.

#### Objective 4.3: Effectively Operate and Maintain the State Plan of Flood Control (SPFC) Facilities

Strategies to achieve this objective include:

**4.3.1: Conduct Routine Channel Maintenance:** To maintain flood carrying capacity of the Sacramento River Flood Control System.

**4.3.2: Operate, Maintain, and Repair Flood Facilities:** DWR will continue maintaining, repairing, and operating specific flood control facilities in the Central Valley as required by state and federal law to ensure that facilities operate as designed during flooding.

**4.3.3: Inspect and Maintain Levees:** Conduct ongoing inspection and maintenance of specific State Plan of Flood Control levees for structural integrity to ensure levees will perform as designed during flooding.

**4.3.4: Develop Sustainable Operations and Maintenance Plans:** Through coordination of state and local levee maintaining agencies with state and federal regulatory agencies, develop multi-year programmatic operations and maintenance plans that incorporate flexibility in multi-objective operations and maintenance as well as protection of aquatic ecosystems.

**4.3.5: Conduct Levee Repairs:** Conduct critical and proactive repairs to the State Plan of Flood Control Levees through cost-sharing to local maintaining agencies.

#### Objective 4.4: Support Capital Improvement Projects that Enhance the State's Flood System

Strategies to achieve this objective include:

**4.4.1: Implement Central Valley Multi-Benefit Flood Projects:** DWR will continue its investment in improving flood protection in the Central Valley through implementation of flood projects as funding becomes available. DWR will continue implementation of the multi-benefit projects such as the Yolo Bypass Integrated Implementation Program.

**4.4.2: Improve State Plan of Flood Control Facilities:** Work in collaboration and cost share with USACE and the local agencies to improve flood protection for areas protected by the facilities of the State Plan of Flood Control in the Central Valley with the objective of providing at least 200-year protection for urban areas, 100-year protection for small communities, and fixing known critical deficiencies in the rural areas of the Central Valley.

**4.4.3: Implement Statewide Flood Risk Reduction Projects:** Work with USACE and local agencies to improve flood management outside the Central Valley.

## Goal 5 | Increase Resiliency to Reduce Residual Risks Resulting from Floods, Drought, and Climate Change

### Objective 5.1: Prepare for and Respond to Periods of Critical Water Shortage

Strategies to achieve this objective include:

**5.1.1: Manage Urban Water Use Efficiency Programs:** Water use efficiency programs will conserve water and will make more water available for most critical needs of the State. DWR will continue supporting and effectively managing urban water use efficiency programs throughout the State.

**5.1.2: Manage Agricultural Water Use Efficiency Programs:** Water use efficiency programs will conserve water and will make more water available for most critical needs of the State. DWR will continue supporting and effectively managing agricultural water use efficiency programs throughout the State.

**5.1.3: Manage Critical Water Shortages:** Effective management of water shortages is critically important to reduce the impact of water shortages during droughts. DWR will establish an ongoing program with trained staff and appropriate tools and processes for effectively managing water shortages.

**5.1.4: Facilitate Responsible Water Transfers:** DWR will establish an ongoing water transfer program to facilitate implementation of responsible water transfer projects. Water transfers from less critical uses to critical health and safety uses can considerably reduce residual risk of water shortages and can effectively increase resiliency of the water management system.

### Objective 5.2: Provide Effective Flood Emergency Response

Strategies to achieve this objective include:

**5.2.1: Assess Real-Time Hydrologic Conditions:** Conduct an assessment of the flood management system in the Central Valley through inspection and evaluation of the flood management facilities. Collect real-time hydrologic information and reservoir status in support of managing floods.



**5.2.2: Integrate Climate Data into Runoff Forecasting:** Assess long-term climate change impacts, and improve long-term and short-term river forecasting models and processes.

**5.2.3: Coordinate Reservoir Operations and River Forecasting:** Prepare reservoir inflow and river forecasts and disseminate them to emergency response agencies and people in the floodplains. Coordinate operations of the reservoirs to reduce the chance of flooding by reducing peak flood flows downstream of the reservoirs.

**5.2.4: Prepare for Flood Emergencies:** Continue preparing for response to flooding by developing and training Incident Command Teams, conducting preseason meetings, training staff to prepare and respond to floods, and other actions to ensure that effective and trained teams prepare, monitor, and respond to flooding.

**5.2.5: Implement Delta Flood Preparedness, Response, and Recovery Program:** Prepare and respond to Delta island flooding by stockpiling flood emergency response materials in strategic locations around the Delta, and work with local agencies for improved flood emergency preparedness.

### Objective 5.3: Address Climate Change

Strategies to achieve this objective include:

**5.3.1: Reduce the Carbon Footprint of DWR:** Lower DWR's greenhouse gas emissions to 50% below their 1990 levels, as described in Greenhouse Gas Emissions Reduction Plan.

**5.3.2: Increase DWR's Resilience to Climate Change:** Further DWR's climate change vulnerability assessments and develop and implement a climate change adaptation plan for the Department.

### Objective 5.4: Provide Effective Floodplain Management

Strategies to achieve this objective include:

**5.4.1: Provide Floodplain Community Assistance and Policy Coordination:** Conduct community visits and collaborate with land use agencies in zoning and land use decisions that minimize development in floodplains. Raise floodplain awareness and notify those who live in the floodplain about the potential flood hazards.

**5.4.2: Conduct Flood Risk Assessment and Risk Mapping:** Work closely with FEMA in assessing flood risks and map them throughout our watersheds. Assist local agencies to develop community flood hazard mitigation plans. Collect, store, and disseminate flood risk information to the public.

**5.4.3: Conduct Floodplain Mitigation Planning:** Conduct watershed-based floodplain mitigation planning and assist in flood cost recovery. Engage in post-flood activities and disaster recovery.

## Goal 6

**Ensure Business Efficiency and Accountability: Provide Professional, Cost-Effective, and Timely Services in Support of DWR's Programs, Consistent with Governmental Regulatory and Policy Requirements.**

### Objective 6.1: Ensure Safety and Security

Strategies to achieve this objective include:

**6.1.1: Maintain a Strong Safety Program for Protection of People and DWR Infrastructures:** Demonstrate to all employees, contractors, cooperating agencies, and the visiting public every day that DWR is committed to preventing occupational injuries and illnesses. Achieve 100% awareness of the DWR Safety System among employees. Promote acceptance, implementation, and adoption of the Safety System across DWR.

### Objective 6.2: Support Workforce Planning

Strategies to achieve this objective include:

**6.2.1: Maintain an Effective Recruitment Program:** Attract the best possible candidates to the exciting and rewarding work of DWR. Develop contacts throughout other public agencies, the private sector, and educational institutions. Attend recruitment events. Advertise position vacancies widely. Promote consistent and positive messaging internally so that all employees are able to act as recruiters if an opportunity arises.

**6.2.2: Develop and Conduct Staff Training:** Provide in-house and external training to develop a prepared, motivated, and upwardly mobile workforce. Streamline class registration and certification monitoring through implementation of an online and integrated Learning Management System. Ensure continuous education of DWR trainers. Prioritize training. Make low-cost online training widely available. Cross-train employees so that skills and knowledge are maintained and widely available. Make training locations available to staff. Widen in-house training offerings in various formats to suit the convenience of employees.

**6.2.3: Ensure Workforce Equality:** Ensure employees and prospective employees are informed about, have access to, and conduct themselves in accordance with the rights and protections afforded by Equal Employment Opportunity laws and policies, and that discrimination complaints are resolved in a fair and equitable manner.

**6.2.4: Manage DWR Budgeting Process for Workforce:** Monitor future year funding, workload, organizational management, and vacancies closely. Reallocate positions when necessary. Use business analytic tools to keep management informed of workforce costs. Augment positions only when a need can be thoroughly demonstrated. Prepare for sun-setting of Enterprise Budget Program (EBP)/Cognos tool.

**6.2.5: Provide Procurement Services:** Partner with DWR programs, other agencies, and vendors in an effective and ethical manner. Promote maximum vendor participation to foster competition and use of Small Businesses and Disabled Veteran Business Enterprises. Apply rules and regulations consistently to ensure appropriate stewardship of public funds. Keep policies and procedures up-to-date.

### Objective 6.3: Conduct Succession Planning and Management

Strategies to achieve this objective include:

**6.3.1: Conduct Ongoing Management Training:** Develop the skills and knowledge of new supervisors and managers through internal and external training and cross-training. Prepare future executives by providing challenging opportunities.

**6.3.2: Provide for Mentoring and Internships:** Establish mentor and internship guidelines and opportunities. Maintain the skills and knowledge of existing managers by allowing them opportunities to share. Provide new and existing employees opportunities to work in different areas of DWR to further develop skills and knowledge. Utilize Retired Annuitants as mentors and trainers. On a case-by-case basis, as managers' duty statements are revised, consider adding mentoring as an "Other Responsibility."

#### Objective 6.4: Provide Customer Service

Strategies to achieve this objective include:

**6.4.1: Provide Professional, Cost-Effective, and Timely Services in Support of Programs:** Provide customer service training. Survey the customers of DWR service organizations on a regular basis. Encourage new service providers to shadow more experienced employees. Encourage routine cross-training of staff to promote consistency in the approach and to prevent gaps in service. Recognize top customer service performers. Keep policies and procedures up to date. Constantly maintain the Service Catalog so employees have comprehensive and current information easily available at all times.

**6.4.2: Promote a Partnership Environment in Serving DWR Programs:** Provide all new employees with DWR Orientation training and opportunities for site visits to DWR projects. Maintain online library containing educational videos and presentations on the history of California water. Promote understanding of the role of General Management, Line Management, and Line Staff offices and divisions. Post employee profiles on DWR's intranet, Current, so employees may search for others with experience relevant to their projects. Encourage participation in the Director's Annual Awards. Advocate for employees' use of RSS feeds and other communication tools to obtain information and announcements on various DWR programs and activities.

**6.4.3: Ensure DWR Compliance with Laws, Regulations, Policies, and Procedures:** Conduct internal audits to determine whether Department policies and procedures are in the best interest of the State of California and that staff are complying with them. Keep policies and procedures up to date. Conduct internal investigations when necessary. Work cooperatively with control agencies to interpret and comply with State laws, policies, and requirements.

**6.4.4: Provide Professional, Cost-Effective, and Timely Information to the Public:** Provide clear and concise statements to the public and news media. Make a useful and attractive public-facing website available, which is accessible to all.

### Objective 6.5: Conduct Finance Planning and Accountability Reporting

Strategies to achieve this objective include:

**6.5.1: Develop Sound Water Management Financing Strategies:** Conduct water management finance planning that identifies various funding sources to support the broad spectrum of DWR's water management activities.

**6.5.2: Ensure All Accountability Reporting Requirements are Fulfilled:** Provide interested parties, including the public, control agencies, Legislature, Governor's Office, etc., with required information in a timely manner. Provide regular reporting to the California Natural Resources Agency bond accounting websites. Comply with California's State Leadership Accountability Act (SLAA).

## IMPLEMENTATION GUIDANCE



To accomplish DWR's mission, we support and encourage a paradigm shift toward system-scale, long-term, outcome-driven water resource management, following the implementation guidance highlighted below.

**Outcome-Based Implementation and Focusing on Effectiveness** – DWR is moving toward outcome-based implementation in which the desired outcomes for investment in water management are defined and established from the onset of program development. Programs' implementation includes tracking to ensure the desired outcome is attained. Meaningful measures of effectiveness emerge from a comparison of actual outcomes (or results) and intended outcomes. DWR will develop and provide statements of clear desired outcomes related to all flood and water management investments, and support long-term data gathering to assess how effective the investments are. DWR will encourage and support this practice for all State investments related to water management programs.

**Establish and Implement Shared Vision for Sustainability** – Sustainability is a resilient and dynamic balance among the resource management goals of providing for a long-term reliable water supply and public health and safety while sustaining vital ecosystems, all in support of a stable economy in the State. DWR supports a shared vision for sustainability as it pertains to all aspects of water and related resource management. This will include the identification of specific and observable performance indicators to gauge water management system performance with regard to sustainability. DWR will work closely with stakeholders and State, local, and federal agencies that are managing resources to encourage them to support this shared vision of sustainability and promote implementation of actions that contribute to our shared vision.

**Invest with a Long-Term View** – Working toward sustainability requires consideration of long-term time horizons. DWR will encourage and support investment decisions based on sound and rigorous planning. Planning will consider meaningful time horizons for desired outcomes, incorporating the best scientific information available. DWR acknowledges that managing toward sustainability will require long-term, substantial, and predictable public funding.



**Plan and Implement at Appropriate Scale** – Given the complexity within the flood and water management system and related natural resources, and the fact that many agencies and organizations are responsible for various aspects of resource management, DWR will plan and implement actions within a more workable and effective geographic scale. DWR will conduct its water management planning and implementation at the river basin scale, so that the interdependent conditions and functions -- including the physical, biological, economic, and social processes within the river basin -- are understood and considered in an integrated fashion.

**Strengthen Partnerships and Help Enhance Governance** – Effective regional governance is needed to plan, finance, and implement regional programs to enhance regional water sustainability. DWR will work with regional partners to strengthen relationships and assist in the formation of effective governance at the regional level.

